

# OVERHEAD AUTOMOTIVE AIRBAG DESIGN

## Abstract

An automotive overhead airbag assembly is provided including an airbag mounted on an inside surface of a vehicle roof at an airbag mount position. The airbag has an airbag stored condition and an airbag deployed position and expands downwards from said vehicle roof when in the airbag deployed position. The assembly includes at least one wing element having a first wing mounting edge mounted to the vehicle roof and a second wing mounting edge mounted to a lower deployed portion of said airbag. The first wing mounting edge extends in a transverse direction from the airbag mount position. The at least one wing element includes a wing stored condition and a wing deployed position. The at least one wing element restricts forward motion of the airbag when the airbag is in the deployed position. The assembly includes a trampoline surface formed by the at least one wing element when the at least one wing element is in said wing deployed position. The trampoline surface absorbs passenger forward momentum during vehicle impact.